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PATENT

Attorney Reference Number 5759-54451
Application Number 09/522,278

In the claims:

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1. (Amended) An aggregated composition comprising (a) a VP22 polypeptide or a fragment thereof having a transport function of VP22, and (b) an oligonucleotide or polynucleotide.

U.E.
2. (Reiterated) An aggregated composition according to claim 1, which further comprises a pharmaceutically acceptable excipient.

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3. (Amended) An aggregated composition according to claim 1, wherein the VP22 fragment comprises amino acid residues 159-301 of VP22.

4. (Reiterated) An aggregated composition according to claim 1, wherein the oligonucleotide or polynucleotide comprises a circular plasmid.

5. (Reiterated) An aggregated composition according to claim 1, wherein the oligonucleotide or polynucleotide comprises modified phosphodiester linkages.

U.E.
6. (Reiterated) An aggregated composition according to claim 5, wherein the modified phosphodiester linkages comprise phosphorothioate linkages.

7. (Reiterated) An aggregated composition according to claim 1, wherein the oligonucleotide or polynucleotide is labeled with a detectable label.

8. (Reiterated) An aggregated composition according to claim 1, wherein the oligonucleotide or polynucleotide is selected from the group consisting of: an antisense molecule, a ribozyme molecule, a chimero-plast, and a polynucleotide capable of binding a transcription factor.

9. (Reiterated) An aggregated composition according to claim 1, wherein the oligonucleotide or polynucleotide encodes a protein or peptide.

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10. (Amended) An aggregated composition according to claim 1, wherein the VP22 polypeptide or fragment thereof is a fusion protein comprising a non-VP22 peptide or protein.

11. (Amended) An aggregated composition according to claim 10, wherein the non-VP22 polypeptide sequence is linked to the VP22 polypeptide or the fragment thereof by a cleavage-susceptible amino acid sequence.

12. (Reiterated) An aggregated composition according to claim 1, wherein the polypeptide is conjugated to a glycoside.

13. (Reiterated) An aggregated composition according to claim 1, wherein the oligonucleotide or polynucleotide is coupled to a non-nucleotide molecule.

N.E.
14. (Reiterated) An aggregated composition according to claim 1, wherein the aggregate comprises polypeptide and nucleotide in a ratio of at least 1 to 1.

15. (Reiterated) An aggregated composition according to claim 1, wherein the oligonucleotide or polynucleotide comprises at least about 10 bases.

16. (Reiterated) An aggregated composition according to claim 1, which comprises particles of said aggregated composition having a particle size in the range of about 0.1 to about 5 microns.

17. (Reiterated) An aggregated composition according to claim 1, wherein said polypeptide and said nucleotide are encapsulated in a liposome.

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18. (Twice Amended) A method of making an aggregated composition according to claim 1, comprising

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(a) contacting the VP22 polypeptide, or the fragment thereof having a transport function of VP22, with an oligonucleotide or a polynucleotide, wherein said contact is in solution; then

(b) mixing the solution obtained in step (a); and

(c) incubating the mixture obtained in step (b) such that said incubation is sufficient for the VP22 polypeptide or fragment thereof to form aggregates with the oligonucleotide or polynucleotide to form aggregates.

N.E.

19. (Reiterated) A method according to claim 18, wherein the polypeptide is contacted with nucleotide in a ratio of at least 1 to 1 of polypeptide to nucleotide.

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20. (Amended) A method of delivering molecules to a cell in vitro comprising (a) contacting said cell with an aggregated composition according to claim 1, thereby delivering the oligonucleotide or polynucleotide to the cell.

21. (Reiterated) A cell preparation which as been treated with an aggregated composition according to claim 1.

N.E.

22. (Reiterated) The method of claim 18, further comprising

(d) isolating aggregates obtained in step (c) which have a particle size of about 0.1 to about 5 microns.

23. (Reiterated) The method of claim 20, further comprising (b) exposing the cell to light, whereby said light exposure promotes disaggregation of the aggregated composition.

REMARKS

Claims 1-23 are pending. Claims 1, 3, 10, 11, 18 and 20 are amended herein. Support for the amending language of claims 1 and 18 can be found throughout the specification, specifically on page 5, lines 21-31, page 7, lines 24-28, page 11, lines 17-23, and page 15, lines 1-5. Claims 3, 10, 11, 18 and 20 are amended to correct form.